

In the Claims:

Please amend the claims as follows:

1. (previously amended) A control system for controlling the movements of a plurality of mechanical units, the control system comprising:

a program unit comprising a plurality of mechanical unit programs, each mechanical unit program comprising program instructions including movement instructions for at least one of said mechanical units,

a plurality of path planners operatively connected to the program unit and to the mechanical units, each path planner adapted to receive movement instructions from at least one of said mechanical unit programs and based on the movement instructions determine how the mechanical unit should move in order to be able to execute the movement instructions, wherein at least one of said path planners is adapted to receive movement instructions from at least two of said mechanical unit programs and based on the movement instructions determine how the mechanical units should move in order to synchronize movements of the mechanical units, and

a switch unit operatively connected to the program unit and the path planners, the switch unit being adapted to switch a mechanical unit program from one path planner to another path planner, such that the movements of the mechanical units are synchronized when the mechanical unit programs are connected to a same path planner and the movements of the mechanical units are independent when the mechanical unit programs are connected to different path planners.

2. (previously amended) The control system according to claim 1, wherein each

mechanical unit program is connected to one of said path planners, and wherein said switch is adapted to upon command disconnect the mechanical unit program from the connected path planner and to connect the mechanical unit program to another path planner.

3. (currently amended) The control system according to claim 1, further comprising:

a central data storage unit operatively connected to the mechanical units, wherein at least one of said mechanical units is arranged to transmit data concerning at least one of a position ~~and/or~~ or a status of the at least one mechanical unit to the central data storage unit.

4. (currently amended) The control system according to claim 3, wherein said at least one mechanical unit is arranged to transmit at least one of position ~~and/or~~ or status data to the central data storage unit when the at least one mechanical unit is stationary.

5. (currently amended) The control system according to claim 3, wherein said at least one mechanical unit is arranged to transmit at least one of position ~~and/or~~ or status data to the central data storage unit while the at least one mechanical unit is moving to a new location.

6. (currently amended) The control system according to claim 4, wherein said position data comprises information concerning at least one of a displacement ~~and/or~~ or a rotation of a coordinate system of said at least one mechanical unit.

7. (previously amended) The control system according to claim 3, wherein the central data storage unit is arranged so that data stored therein is accessible by an operator, a

mechanical-unit program or the path planners.

8. (previously amended) The control system according to claim 3, wherein the central data storage unit is arranged so that data stored therein is accessible via a network.

9. (currently amended) A method for controlling the movements of a plurality of mechanical units, the method comprising:

storing in a program unit a plurality of mechanical unit programs, each mechanical unit program comprising program instructions including movement instructions for one of said mechanical units,

storing at least one of position or status data from at least one of the plurality of mechanical units in a central data storage unit,

connecting said program unit and said mechanical unit programs to a plurality of path planners so that at least two of the mechanical unit programs are connected to different path planners, wherein each of said at least two path planners receives instructions from the connected mechanical unit program and based on the movement instructions determines how the mechanical unit should move in order to be able to execute the movement instructions of the program, and

switching at least one of the mechanical unit programs to another path planner so that more than one of the mechanical unit programs is connected to a same path planner, which receives instructions from the connected mechanical unit programs and based on the received instructions determines how the mechanical units should move in order to synchronize movements of the mechanical units.

10. (previously amended) The method according to claim 9, further comprising:  
connecting each mechanical unit program to one of said path planners,  
upon command disconnecting at least one of the mechanical unit programs from the  
connected path planner, and  
connecting the mechanical unit program to another path planner.

11. (cancelled)

12. (previously amended) A computer program product, comprising:  
a computer readable medium; and  
computer program instructions recorded on the computer readable medium for making a  
computer or processor execute a method comprising  
storing a plurality of mechanical unit programs, each comprising program instructions  
including movement instructions for one of said mechanical units,  
connecting said mechanical unit programs to a plurality of path planners so that at least  
two of the mechanical unit programs are connected to different path planners, wherein each  
said at least two path planners receives instructions from the connected mechanical unit program  
and on basis thereof determines how the mechanical unit should move in order to be able to  
execute the movement instructions of the program, and  
switching at least one of the mechanical unit programs to another path planner so that  
more than one of the mechanical unit programs are connected to the same path planner, which  
receives instructions from the connected mechanical unit programs and on basis thereof

determines how the mechanical units should move in order to synchronize their movements.

13. (cancelled)

14. (previously amended) The control system according to claim 1, wherein the control system comprises a plurality of mechanical units comprising robots and/or external axes, which are programmed to execute at least one task where at least two of said mechanical units move synchronously.

15. (currently amended) A method for controlling the movements of a system comprising a plurality of mechanical units, wherein the mechanical units comprise at least one of robots or external axes, the method comprising:

storing in a program unit a plurality of mechanical unit programs, each mechanical unit program comprising program instructions including movement instructions for one of said mechanical units,

connecting said program unit and said mechanical unit programs to a plurality of path planners so that at least two of the mechanical unit programs are connected to different path planners, wherein each of said at least two path planners receives instructions from the connected mechanical unit program and based on the movement instructions determines how the mechanical unit should move in order to be able to execute the movement instructions of the program,

switching at least one of the mechanical unit programs to another path planner so that more than one of the mechanical unit programs is connected to a same path planner, which

receives instructions from the connected mechanical unit programs and based on the received instructions determines how the mechanical units should move in order to synchronize movements of the mechanical units.

~~The method according to claim 9, wherein the system comprises a plurality of mechanical units comprising robots and/or external axes, the method further comprising:~~

~~programming the mechanical units programmed to execute at least one task, and  
synchronously moving at least two of said mechanical units.~~

16. (previously amended) The computer program product according to claim 12, wherein the system comprises a plurality of mechanical units comprising robots and/or external axes, and wherein the computer program instructions include executing at least one task and synchronously moving at least two of said mechanical units.